

FISHERY MANAGEMENT PLAN
FOR THE COMMERCIAL TANNER CRAB FISHERY
IN THE KODIAK DISTRICT OF REGISTRATION AREA J, 2003

By

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ABSTRACT

Two sections of the Kodiak District will open for a commercial Tanner crab *Chionoecetes bairdi* fishery on January 15, 2003 with guideline harvest levels (GHLs) of 170,000 pounds for the Northeast Section and 340,000 pounds for the Eastside Section. This report provides a brief historic overview and summary of recent commercial Tanner crab fisheries. The Alaska Board of Fisheries (BOF) regulatory harvest strategy for Tanner crab is summarized. A detailed explanation of pot limits, gear operation hours, fishery delay for severe weather, section and superexclusive registration requirements adopted by the BOF in 2002 are provided. Minor fisheries have occurred in 2001 and 2002 under the provisions of the harvest strategy.

In October 2002, the Commercial Fisheries Entry Commission (CFEC) placed the Kodiak District Tanner crab fishery under limited entry. In 2003, only fishers that meet the CFEC qualifications may participate. The 2003 fishery will not count as a qualification year for subsequent award of permits.

Information on tank inspections, gear requirements, inseason reporting, pot storage, landing requirements, and contact personnel within the Alaska Department of Fish and Game (ADF&G) is also provided. Harvesters are encouraged to use this document as a supplement to the 2002-2003 Commercial Shellfish Fishing Regulations in order to understand the rules governing this fishery.

INTRODUCTION

The Kodiak District for Tanner crabs are the waters of Registration Area J south of the latitude of Cape Douglas (58° 51' 06" N lat.), west of the longitude of Cape Fairfield (148° 50' 15" W long.) and east of the longitude of Cape Kumlik (157° 27' W long.). The district is subdivided into eight sections: Northeast, Eastside, Southeast, Southwest, Semidi Island, Westside, North Mainland, and South Mainland. Sections are described in 5 AAC 35.505 DESCRIPTION OF REGISTRATION AREA J DISTRICTS on pages 190-191 of the 2002-2003 Commercial Shellfish Fishing Regulations and are illustrated in Figure 1.

Overview

The Kodiak District Tanner crab commercial fishery began in 1967. Commercial harvest peaked in the 1977/78 season when over 33 million pounds were harvested from the district (Table 1).

In the late 1980s, ADF&G began to use a trawl survey, developed by the National Marine Fisheries Service (NMFS), to obtain relative abundance estimates and predict future recruitment trends of Tanner crabs around Kodiak. Prior to this time, pot surveys were used as stock assessment tools with varying levels of success.

Progressive declines in the harvestable surplus of Tanner crabs in the Kodiak District led to decreased quotas and closures of some sections to commercial fishing. By 1994, commercial fisheries were closed in all Kodiak sections due to reduced stock size. Closures continued through the rest of the 90s, with some increases in stock size noted late in the decade.

The BOF adopted a comprehensive harvest strategy in 1999 for management of Tanner crabs in the Kodiak District. Under this strategy, a commercial Tanner crab fishery may occur when 1) preseason trawl survey abundance estimates exceed established thresholds; 2) two or more sections, excluding the South Mainland and Semidi Island Sections, are above threshold and will be opened; 3) the guideline harvest level (GHL) in any open section exceeds 100,000 lbs; and 4) abundance is sufficient to provide a total district harvest of at least 400,000 pounds (Urban et al. 1999).

In 1999, additional measures adopted by the BOF included a stair-step pot limit for the Kodiak District of 30, 40, or 60 pots per vessel depending on the GHL and restrictions on the hours that gear can be operated. The harvest strategy criteria were met in 2001 and 2002 and minor commercial fisheries occurred (*see Recent Fisheries on page 3*).

Substantial revisions to several aspects of the fishery management occurred during the 2001/02 BOF meeting cycle. The details of these revisions can be found in the 'Newly Adopted BOF Regulations' on page 4.

In October 2002, the Commercial Fisheries Entry Commission (CFEC) adopted a petition to limit entry into the Kodiak District Tanner crab fishery. The effective date of limitation is January 1, 2003. This means that participation in at least one the qualifying years of 1993, 1994, 2001, or 2002 is required to participate in the 2003 fishery. Also, the 2003 and all subsequent fisheries will not be

counted as qualifying years in the limitation process. For more information regarding the limited entry process, contact CFEC (Appendix A).

Recent Fisheries

2001 Fishery

The Kodiak District opened with a total GHL of 500,000 pounds with 225,000 pounds available in the Northeast and 275,000 in the Eastside Sections. The final harvest was 510,407 pounds with disproportionate catches occurring: the Northeast harvest was 130,644 pounds, while the Eastside harvest was 379,763 pounds. One hundred forty four vessels participated with 155 individual permit holders making landings. The fishery value was estimated at \$1.2 million based on the \$2.30 per pound exvessel value. Catch, effort, and value information for the 2001 Kodiak District fishery is show in Table 2.

The 2001 fishery was prosecuted very quickly with the Eastside open for only 20 hours and the Northeast open for 56 hours. The Eastside Section fishery was closed while baited gear was still on the grounds; therefore, fishermen were required to deliver their crab and then return to the grounds to ‘rail dump’ the contents of their pots. Twelve hours advance notice was given in the Northeast Section and no baited gear was on the fishing grounds at the time of the closure.

2002 Fishery

The Northeast and Eastside Sections met the required criteria for a commercial opening in 2002 as well. The total GHL was 500,000 pounds with 300,000 pounds available in the Northeast Section and 200,000 pounds in the Eastside Section. The total harvest was 361,166 from 279 landings by 210 permit holders onboard a total of 180 unique vessels. The exvessel fishery value was estimated at \$800,000. Table 2 contains a summary of the catch, effort, and value information for the 2002 season.

Like the fishery in 2001, the 2002 fishery was prosecuted very quickly in most of the fishing area. The Eastside Section was open for 14 total hours of fishing. Fishers were given enough notice of the closure so baited gear was not left on the grounds, as had been the case in 2001. Inshore portions of the Northeast Section closed after 5 daily fishing periods (60 hours) with the remainder of the section open for an additional 25 daily fishing periods (300 hours).

REGULATIONS

Regulations pertaining to Tanner crab fishing in the State of Alaska can be found in chapter 35 of the Alaska Administrative Code (AAC). Chapter 35 begins on page 170 of the 2002-03 shellfish regulations. Specific regulations that pertain to the Tanner crab fisheries in Registration Area J (Westward Region) begin on page 189. The harvest strategy regulation is 5 AAC 35.507 KODIAK, CHIGNIK, AND SOUTH PENINSULA DISTRICTS, *C. bairdi* TANNER CRAB HARVEST STRATEGIES. The harvest strategy can be found on pages 192-194 of the 2002-2003 Commercial Shellfish Fishing Regulations, which will be referred to as ‘shellfish regulations’ for the remainder of this report.

Some of the regulations regarding Tanner crab fishing are summarized below, particularly those that have changed as a result of BOF action in 1999 and 2002. For additional information on regulations, contact the ADF&G office in Kodiak and refer to the shellfish regulations (available at ADF&G offices or at our website: <http://www.state.ak.us/adfg/>).

Newly Adopted BOF Regulations

Several changes were implemented by the BOF in 2002 that will be in effect for the 2003 fishery. The following is a summary of each action, regulatory reference, and an explanation of how the regulation will affect the fishery:

- The Kodiak District is now a superexclusive registration district for Tanner crabs, 5 AAC 35.506 AREA J REGISTRATION (a). A vessel that registers for the 2003 Tanner crab fishery may not be used to take Tanner crabs or any crab of the genus *Chionoecetes* in another district within the same registration year. A vessel is considered to be registered for the fishery when the permit holder signs their name on the registration form; a valid registration does not require actual fishery participation or landings.
- Vessels must register for a specific section in the Kodiak District 5 AAC 35.506 AREA J REGISTRATION (h). A vessel operator may only be registered to fish one section at a time. Participants will be required to specify on their registration what section they intend to participate in for the 2003 fishery. Fishers may change this section registration at any time by contacting ADF&G by phone, FAX, or in person.
- Revised pot limits have been implemented for the 2003 fishery. 5 AAC 35.525 LAWFUL GEAR FOR REGISTRATION AREA J (1)(A)-(D). When the district GHL is less than 2.0 million pounds, the pot limit will be 20 pots per vessel. This is the pot limit for the 2003 fishery and is a 10 pot per vessel reduction from the two previous seasons.
- The daily fishing period when gear may be operated has been revised for 2003. 5 AAC 35.510 FISHING SEASONS FOR REGISTRATION AREA J (a). The daily fishing period has been reduced from 12 to 10 hours, with fishing allowed 8:00 AM to 5:59 PM and a 'soak' period of 14 hours, occurring from 6:00 PM to 7:59 AM.
- Criteria for a regulatory delay of the season for severe weather were adopted. 5 AAC 35.510 FISHING SEASONS FOR REGISTRATION AREA J (a). The details of how this regulatory criteria will be used to assess weather and delay the fishery opening, if needed, can be found in the 'Fishery Opening Delay Due To Severe Weather' section on page 10.

CFEC Limitation

As previously mentioned, the Kodiak District Tanner crab fishery is undergoing the process of limited entry. Only the 331 permit holders eligible for interim-use permits from CFEC may participate in the 2003 or any subsequent Tanner crab fishery in the Kodiak District. In addition, **participation in the 2003 fishery will not count as participation** in the limitation process. CFEC will develop a point system to reduce the 331 interim-use permits to 180. The proposed

point system language will be available in early 2003 and will go through a public review and comment period. For more information, contact CFEC (Appendix A).

2003 Guideline Harvest Levels

The following GHLS will be in place for the Northeast and Eastside Sections of the Kodiak District for the 2003 commercial Tanner crab fishing season:

<i>Section</i>	<i>2003 Guideline Harvest Level</i>
Northeast	170,000 pounds
Eastside	340,000 pounds
Total Kodiak District	510,000 pounds

The estimated number of legal crabs from the 2001 trawl survey in these two sections is slightly over 1,364,000 animals. This is a reduction from the 1,600,000 legal crabs in 2001 and 2,000,000 estimated legal males from the 2000 survey. The Southeast Section was above the threshold level of mature abundance in 2002 however, the Southeast Section calculated GHL was less than 100,000 pounds. Therefore, the Southeast Section will not open in 2003 but would be eligible to open in 2004 if above threshold and a minimum GHL of 100,000 pounds is available.

The fishery will close when ADF&G determines that the GHL is achieved or when conditions indicating a threat to the long term health of the stock, such as low catch per pot or excessive bycatch of female or sublegal male Tanner crabs, are observed. The regulatory season closure date is March 31.

Appendix B depicts the estimated population of male Tanner crabs by carapace width from the 1987 through 2002 surveys. Alaska Statute 16.05.815 CONFIDENTIAL NATURE OF CERTAIN REPORTS AND RECORDS (8)(c) requires the 2002 survey location data to remain confidential until the fishing season is completed. Figure 2 shows the distribution of legal-sized animals estimated from the 2000 trawl survey, Figure 3 shows the distribution of legal-sized animals from the 2001 survey.

Gear Operation Hours

In 2002, the BOF revised gear operation hours for the Kodiak District. Pot gear may only be operated from 8:00 AM to 5:59 PM. Operation of gear, which includes setting or retrieving pots, is prohibited from 6:00 PM to 7:59 AM. Further information on fishing seasons and gear operation hours can be found under 5 AAC 35.510 FISHING SEASONS FOR REGISTRATION AREA J on page 195 of the shellfish regulations.

Pot Limits and Buoy Tags

The following table lists the new pot limits at various GHLS:

<u>Guideline Harvest Level Range</u>	<u>Pot limit</u>
Less than 2,000,000 pounds	20 pots per vessel
2,000,000 to 4,000,000 pounds	30 pots per vessel
4,000,000 to 5,000,000 pounds	40 pots per vessel
5,000,000 pounds or greater	50 pots per vessel

The pot limit for the 2003 Kodiak District fishery will be 20 pots per vessel. To ensure compliance with pot limit regulations, the main or trailer buoy on each pot must display one fishery-specific identification tag for the current year. The regulation 5 AAC 35.526 TANNER CRAB POT MARKING REQUIREMENTS FOR REGISTRATION AREA J on page 174 of the shellfish regulations contains guidelines for replacing lost tags. The vessel owner, operator, or agent must complete an affidavit form describing how the tags were lost and supply the unique number(s) of each lost tag.

Tags will be available for purchase beginning in mid-December at a cost of \$1.50 per tag. A valid 2003 Tanner crab interim-use CFEC permit card is required to purchase tags. Participants from areas outside the city of Kodiak can purchase tags via U.S. Mail until December 31; call the ADF&G office in Kodiak for details (907) 486-1840. Appendix A contains additional contact information.

Gear

Gear for the commercial Tanner crab fishery is limited to pots no more than 10 feet long by 10 feet wide by 42 inches high with rigid tunnel eye openings that are not more than five inches in height. Tunnel eye opening perimeters must be individually more than 36 inches. Ring nets **are not** legal gear in the Kodiak District for the commercial take of Tanner crabs. The specific language regarding legal pot dimensions can be found under 5 AAC 35.050 LAWFUL GEAR FOR TANNER CRAB on page 198 of the shellfish regulations.

Escape mesh or ring requirements have been added to regulations for legal Tanner gear. Each pot used to take Tanner crabs must have at least one third of one vertical surface of the pot composed of not less than 7-1/4 inch stretched mesh webbing or have no less than four circular escape rings which have an inside diameter of at least five inches. If using rings, they must be installed on the vertical plane of the pot to allow for escapement of undersized crabs. Otherwise, the rings are not required to be placed within a certain distance from the bottom as they are in some Bering Sea fisheries. However, ADF&G recommends placing rings within one mesh of the bottom of the pot to optimize escapement of undersized crabs. The specific language on escape device requirements can be found under 5 AAC 35.525 LAWFUL GEAR FOR REGISTRATION AREA J on page 198 of the shellfish regulations.

All pots must be equipped with a biodegradable escape mechanism as described in 5 AAC 39.145 ESCAPE MECHANISM FOR SHELLFISH AND BOTTOMFISH POTS on page 56 of the shellfish regulations. An opening 18 inches or greater in length that is placed within six inches of the

bottom of the pot must be laced, sewn, or secured together by a single length of untreated, 100 percent cotton twine no larger than 30 thread.

Buoys utilized on pots must comply with 5 AAC 35.051 TANNER CRAB GEAR MARKING REQUIREMENTS listed on page 174 of the shellfish regulations. The buoy that contains the ADF&G number marking may not be marked with additional numbers; however, symbols and letters are acceptable on the buoy with the ADF&G number. Trailer or other buoys used to mark ownership or string sequence may be marked with any desired numbers, symbols, or letters.

Operation of Other Pot Gear, Pot Storage, and Landing Requirements

There is a 14-day stand down period for the operation of pot gear before the commercial Tanner crab fishery opening in the Kodiak District. No person or vessel that will participate in the commercial Tanner crab fishery may operate commercial, subsistence, sport, or personal use pots for any species within the district during that 14-day period.

To clarify some situations that occurred in the 2001 and 2002 seasons, legally outfitted pots with buoy tags attached may be placed into shallow water storage during the 14-day stand down period. However, vessels may not retrieve gear already in legal storage to put tags on gear during the 14-day stand down period. In addition, vessels **will not** be allowed to retrieve gear from storage during the 24-hour period after tank inspection but before the fishery opening, due to enforcement concerns. There would be no way to distinguish a vessel retrieving gear from storage and a vessel fishing before the fishery opening. At the time of the fishery opening, all gear onboard and in the water must have buoy tags affixed to be in compliance.

After the closure of the Tanner crab season, vessels wishing to participate in the Pacific cod fishery must either store or bring in all Tanner pots and register with ADF&G for the cod fishery. Additional stipulations on the operation of other pot gear within the Kodiak District can be found under 5 AAC 35.053 OPERATION OF OTHER POT GEAR on page 175 of shellfish regulations.

Up to 20 pots may be stored for up to 30 days before the season in waters of 25 fathoms or less with all bait and bait containers removed and with the doors secured fully open (or not secured closed for cone or pyramid pots). Although gear storage does exist, no vessel may have more than the specified pot limit onboard or in wet storage in the registration district (all waters from Cape Douglas to Kilokak Rocks) while the vessel is validly registered. The regulatory language concerning pot storage can be found at 5 AAC 35.052 TANNER CRAB GEAR STORAGE REQUIREMENTS on page 175 of the shellfish regulations.

Delivery requirements, post-closure pot storage requirements, and re-registration requirements vary depending on the type of area closure and the amount of notice given. The following is a summary of closure scenarios, subsequent pot storage options, delivery requirements, and re-registration requirements contained in 5 AAC 35.030, 5 AAC 35.031, 5 AAC 35.052, 5 AAC 35.527, and 5 AAC 35.556:

- *Closure of an entire section with 6 or more hours notice of the closure given.* Vessel operators are required to deliver all catch from the section within 24 hours of the closure. Unbaited gear with doors secured open may be stored in waters deeper than 25 fathoms for

72 hours following the closure. After 72 hours, all gear remaining in the closed section must be removed or stored in waters shallower than 25 fathoms. Gear may remain in shallow water storage for up to 30 days after the closure of the entire Kodiak District. Vessel operators may contact ADF&G and re-register for an open section while in transit from the closed section. This will permit vessels to legally place baited gear, once validly registered, in the waters of the open section provided the 24 hour delivery deadline is met.

- *Closure of an entire section with less than 6 hours advance notice of the closure given.* Vessel operators are required to proceed directly to port at the time of the closure and deliver within 24 hours. Vessel operators may not place gear in storage, retrieve pots from storage, or place gear in an open section until they have completed their delivery of crabs from the closed section. Vessel operators with baited gear may only store baited pots in waters deeper than 25 fathoms for 72 hours following the closure. Vessel operators are required to immediately return to the fishing grounds after their delivery to 'rail dump' all crab from baited gear left on the grounds. Vessel operators may re-register for an open section after completing their delivery and removing any baited gear from the grounds. A tank inspection will be required before vessels may register for the remaining open section.
- *Partial closure of a fishing section with 6 or more hours notice of the closure given.* Vessel operators are required to deliver all crabs from the section within 24 hours of the closure. Vessel operators may store pots in waters deeper than 25 fathoms for 72 hours in the closed waters of the section. Vessel operators may place, or simultaneously have, baited gear in the open waters of the same section before delivery provided the 24 hour delivery deadline is met.
- *Partial closure of a fishing section with less than 6 hours notice of the closure given.* This scenario is highly unlikely. Should this type of closure occur the landing, pot storage, and re-registration requirements would be provided in a news release.
- *Closure of the entire Kodiak District with 6 or more hours notice of the closure given.* Vessel operators are required to deliver all crabs within 24 hours of the closure. Vessel operators may store pots with bait and bait containers removed and doors secured open in waters deeper than 25 fathoms for up to 7 days following the closure. Gear may be stored with bait and bait containers removed and doors secured open in waters shallower than 25 fathoms for 30 days after the closure.
- *Closure of the entire Kodiak District with less than 6 hours notice of the closure given.* Vessel operators are required to proceed directly to port at the time of the closure and deliver within 24 hours. After the closure, vessel operators may not place gear in or remove gear from storage until they have completed their delivery of crabs from the closed section. Baited gear may be stored in waters deeper than 25 fathoms for 72 hours following the closure. Vessel operators are required to immediately return to the fishing grounds after their delivery to 'rail dump' any baited gear left on the grounds. Pots may then be stored in waters shallower than 25 fathoms for up to 30 days.

Vessel operators wishing to deliver to ports outside the district are required to contact the ADF&G office in Kodiak. Vessels delivering outside the district must provide the estimated number of crabs onboard the vessel at the time of the closure, intended port and processing facility where delivering, and estimated time of arrival. Additional requirements exist for catcher-processors and vessels mechanically disabled. Vessels legitimately delayed due to circumstances of weather will be addressed on a case by case basis. The specific regulation is 5

AAC 35.031 TANNER CRAB LANDING REQUIREMENTS and is on page 172 of the shellfish regulations.

Registration, Tenders, and Tank Inspections

Vessel operators must have a 2003 limited entry interim-use permit card for Area J Tanner crab and a current 2003 commercial vessel license. Vessels that do not qualify for a CFEC limited entry interim-use permit may not participate in the Kodiak District Tanner crab fishery; the fishery is no longer “open access”. Interim-use permits and vessel licenses can be obtained from the CFEC in Juneau.

Tender vessels must register with ADF&G before beginning tendering operations. Tender vessels may not have a pot-hauling block onboard nor may they be used to harvest Tanner crab.

Tank inspections are required for vessels with a circulating sea water system to confirm that no crabs are onboard the vessel prior to the opening. Gear will also be inspected at the time of tank inspection to ensure it is in compliance with all gear regulations. Tanks will be inspected beginning at noon on January 14 unless the fishery is delayed for severe weather (*see Fishery Opening Delay Due to Severe Weather*). Tank inspections will begin at noon, 24 hours prior to the fishery opening. Arrangements will be made to accommodate vessel inspections in Old Harbor. Upon successful completion of the tank inspection and gear inspection process, a valid 2003 shellfish registration will be issued to the vessel. A copy of this registration must remain onboard the vessel while fishing. This registration becomes invalid 24 hours after the closure of the fishery. Therefore, vessels do not have to unregister from Tanner crab and re-register for other fisheries such as groundfish unless wishing to begin operations within 24 hours of the closure.

Size Limit

The legal minimum size of Tanner crabs that can be harvested in the Kodiak District is 5.5” (140 millimeters) carapace width (CW). Only legal size male crabs can be retained; all other crabs incidentally captured must be immediately returned to the water unharmed. This includes king crab, as they cannot be legally taken in a commercial Tanner crab fishery for subsistence purposes.

FISHERY MANAGEMENT PLAN AND VOLUNTEER CATCH REPORTING

ADF&G will manage the Kodiak District commercial Tanner crab fishery from inseason catch reports provided by fishers. Inseason management will allow for real-time fishery decisions and the ability to consider changes in effort, fleet behavior, and weather. ADF&G will make every effort to allow sufficient time for fishers to configure gear for storage or to place gear onboard before a closure, however the potential exists for a short advance notice closure.

ADF&G may manage inshore and offshore areas separately, closing one portion of a section while allowing continued harvest in other locations within the same section. This was done in 2002 when the inshore portion of the Northeast Section was closed after 5 fishing periods; the offshore portion remained open for an additional 25 fishing periods. Partial section closures will depend on effort, fishery removals, and performance indicators.

Any validly registered vessel may participate in the reporting process and each registering vessel will be issued a 2003 reporting code and worksheet. Reports will be taken over marine VHF channel 10, single sideband (SSB) 4125 kHz, telephone, and e-mail. Vessel operators will be issued a reporting worksheet during tag sales and/or tank inspections to participate in inseason reporting.

Contents of the daily report will contain confidential codes for the section in which vessel operator is fishing, statistical area, number of pot lifts, and number of crabs retained for each 12-hour fishing period. Reports will be taken at 6:30 PM (1830 hours) daily and may be transmitted via SSB, marine telex, e-mail, and satellite or cell phone. Operators will be asked during the registration process which method they will use to submit daily reports. ADF&G will update the fleet on SSB 4125 kHz with the status of the fishery each morning at 7:30 AM (0730 hours). Any closure announcement will be made on this frequency. Updates and closure announcements will be distributed via e-mail, FAX, and passed along to all participating processing facilities.

Details of the tank inspection process, updates on inseason reporting, and other fishery related information will be forthcoming in ADF&G news releases.

FISHERY OPENING DELAY DUE TO SEVERE WEATHER

In 2002, the BOF adopted regulatory language that would delay the opening of the entire Tanner crab fishery for 24 hours if gale force winds (35 knots or higher from any direction) are forecast to occur in any section scheduled to open. The regulatory language can be found on page 195 of the shellfish regulation book under 5 AAC 35.510 FISHING SEASONS FOR REGISTRATION AREA J (a). Under the language of this regulation, if the National Weather Service (NWS) forecast issued at 4 am on the day of tank inspections contains gale force winds (35 knots or higher from any direction) for the 48-hour forecast in areas that correspond to those scheduled to open, the fishery opening will be delayed in all sections for 24 hours. The corresponding NWS areas for the Kodiak District are illustrated in Appendix C and listed as follows:

<u>Kodiak District sections</u>	<u>NWS Area</u>
Northeast Section	3B
Eastside Section	3B
Southeast Section	3B
Westside Section	3C
North Mainland Section	3C

If the following morning's 4 am forecast contains gale warnings, the tank inspections and fishery opening would be delayed another 24 hours. The season opening may be delayed on a 24-hour rolling basis until January 24. If the fishery has not opened by the 24th, tank inspections would

occur at noon and the fishery would open on January 25, regardless of any gale force warnings in the NWS forecast. The weather delay criteria is not applicable to the Southwest and Semidi Island Sections of the Kodiak District. Appendix D contains a hypothetical NWS forecast with the opening criteria illustrated.

LITERATURE CITED

Urban, D., D. Pengilly, D. Jackson, I. Vining. 1999. A Tanner crab harvest strategy for Kodiak, Chignik, and the South Peninsula Districts. A Report to the Board of Fisheries. Alaska Department of Fish and Game, Division of Commercial Fisheries, Westward Region, Regional Information Report 4K99-21, Kodiak.

Table 1. Commercial catch and effort for the Tanner crab *Chionoecetes bairdi* fishery for the Kodiak District, 1967-2002.

Year	Vessels	Landings	Number of Crab	Number of Pounds	Pots Lifted	CPUE	Average Weight	Price Per Pound (\$)
1967	NA	83	NA	110,961	NA	NA	NA	0.07
1968	NA	817	NA	2,560,687	NA	NA	NA	0.10
1969	85	955	NA	6,827,312	72,748	43	NA	0.11
1969/70	67	833	3,237,244	8,416,782	78,266	42	2.6	0.11
1970/71	82	453	2,686,067	6,744,163	60,967	44	2.5	0.11
1971/72	46	505	3,878,618	9,475,902	65,907	59	2.4	0.13
1972/73	105	1,466	13,609,688	30,699,777	188,158	72	2.3	0.17
1973/74	123	1,741	11,857,573	29,820,899	217,523	55	2.5	0.20
1974/75	74	471	5,459,940	13,649,966	73,826	74	2.5	0.17
1975/76	104	1,168	10,748,958	27,336,909	199,304	54	2.5	0.20
1976/77	102	998	7,830,727	20,720,079	164,213	48	2.6	0.33
1977/78	148	1,483	12,401,243	33,281,472	251,621	49	2.6	0.43
1978/79	218	1,225	10,702,829	29,173,807	275,455	38	2.7	0.55
1979/80	211	1,385	6,813,128	18,623,875	282,946	24	2.7	0.55
1980/81	188	771	4,398,631	11,748,629	174,351	25	2.7	0.65
1981/82	221	950	5,413,467	13,756,159	230,403	24	2.5	1.65
1982/83	348	1,439	7,744,812	18,927,061	377,562	21	2.4	1.25
1983/84	303	1,229	5,891,968	14,478,066	303,764	19	2.5	1.20
1984/85	214	710	4,567,037	12,024,553	176,830	26	2.6	1.50
1985/86	233	601	3,457,930	8,996,151	160,808	21	2.6	1.90
1986/87	189	503	1,830,365	4,833,473	110,963	16	2.6	2.62
1987/88	176	557	1,614,874	3,888,906	101,488	16	2.4	2.40
1988/89	171	567	2,106,320	5,208,999	86,556	24	2.5	3.05
1989/90	233	548	1,435,477	3,456,314	97,333	15	2.4	2.40
1990/91	137	448	764,107	1,917,713	54,110	14	2.5	1.59
1991/92	143	434	982,391	2,400,213	47,384	20	2.4	2.22
1992/93	140	353	518,982	1,318,446	43,528	12	2.5	2.10
1993/94	129	378	510,681	1,252,342	41,527	12	2.5	2.25
1994/95 to 1999/2000 NO COMMERCIAL FISHERY								
2000/2001	144	219	193,138	510,407	7,233	27	2.6	2.30
2001/02	181	279	150,465	361,166	10,446	14	2.4	2.21

Table 2. Catch, effort, and value from the 2001 and 2002 Kodiak District Tanner crab fisheries.

Section	Number of Vessels	Number of Permits	GHL (pounds)	Pounds Harvested ^a	Pots lifted	CPUE	Average Weight (lbs.)	Price per pound (\$)	Exvessel value	No. of fishing periods open
2001 Fishery										
Northeast	62	65	225,000	130,644	3,266	17	2.8	2.30	875,453	5
Eastside	84	92	275,000	379,763	4,007	34	2.4	2.30	300,481	2
Total	144 ^b	155 ^b	500,000	510,407	7,233	27	2.6	2.30	1,173,934	
2002 Fishery										
Northeast	104	118	300,000	127,818	6,005	10	2.6	2.21	515,101	4.5 / 30
Eastside	88	103	200,000	233,348	4,441	20	2.2	2.21	282,150	1.5
Total	181 ^c	211 ^c	500,000	361,166	10,446	14	2.4	2.21	797,251	

^a Includes deadloss.

^b Two vessels participated in both sections.

^c Eleven vessels participated in both sections, one vessel fished but failed to register.

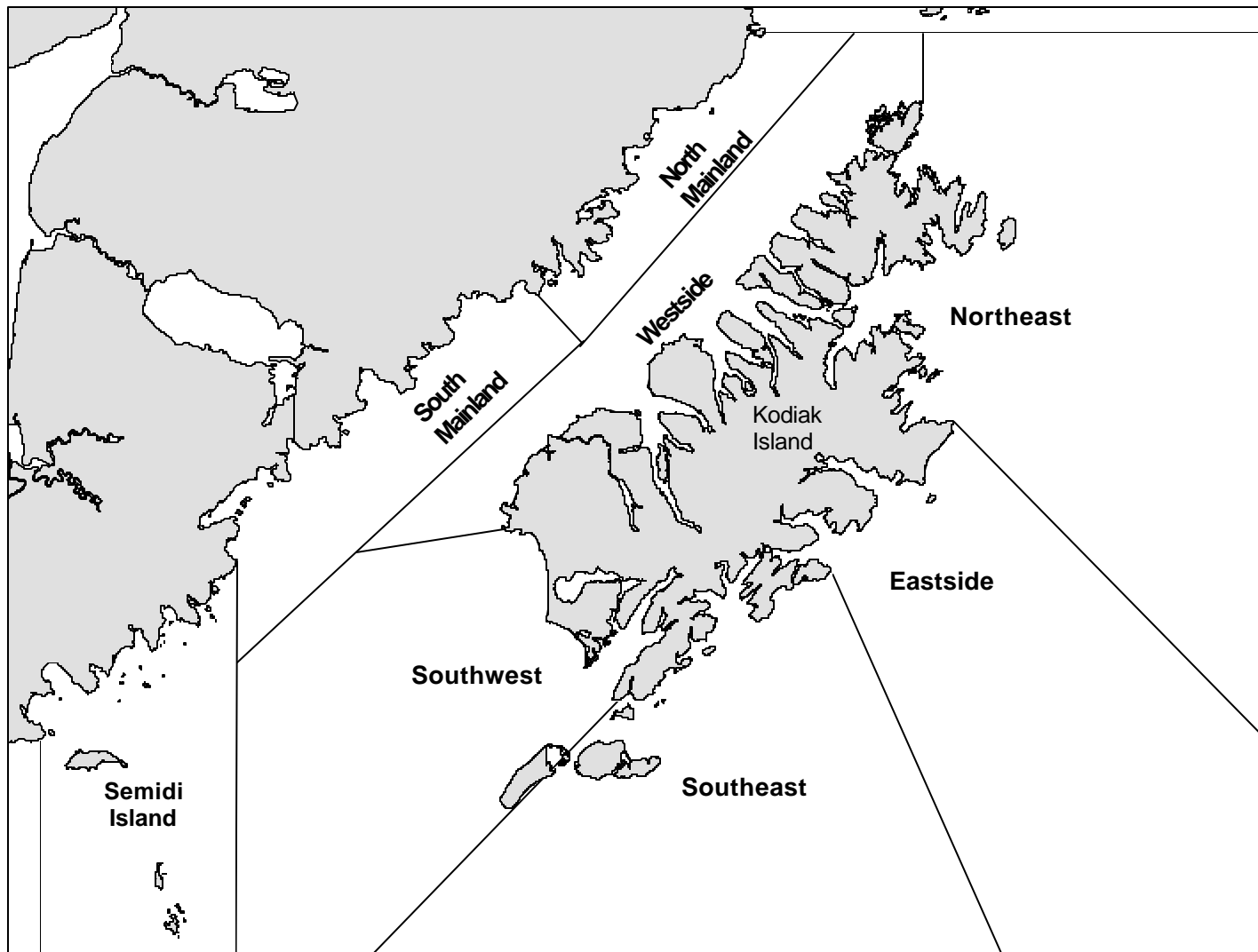


Figure 1. Kodiak Tanner crab fishing District and Sections, 2003. *Note-the Eastside Section boundary is in Sitkalidak Narrows, east of 153° 16' W long.*

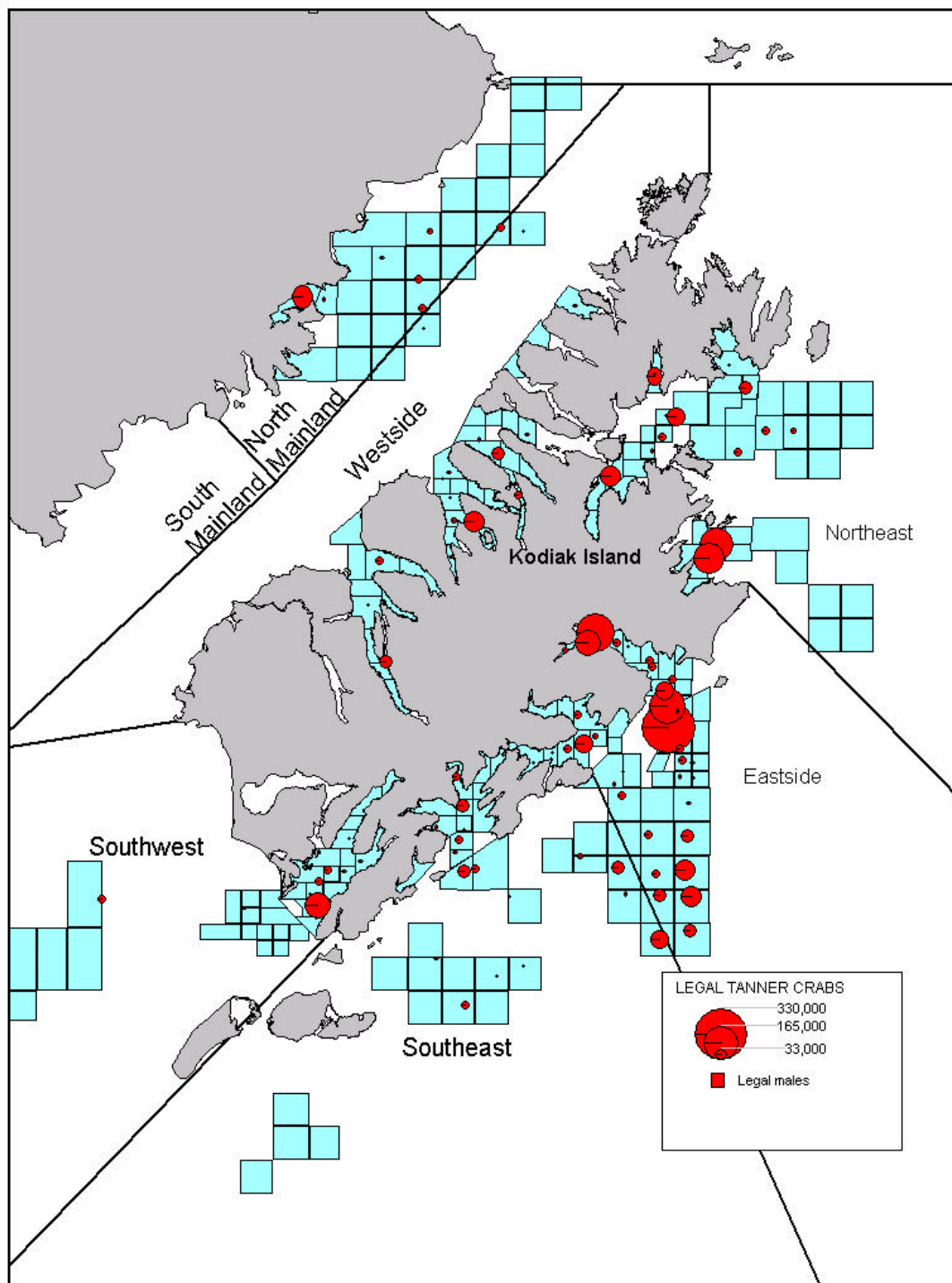


Figure 2. Population estimates of legal male Tanner crabs in the Kodiak District from the 2000 Kodiak trawl survey.

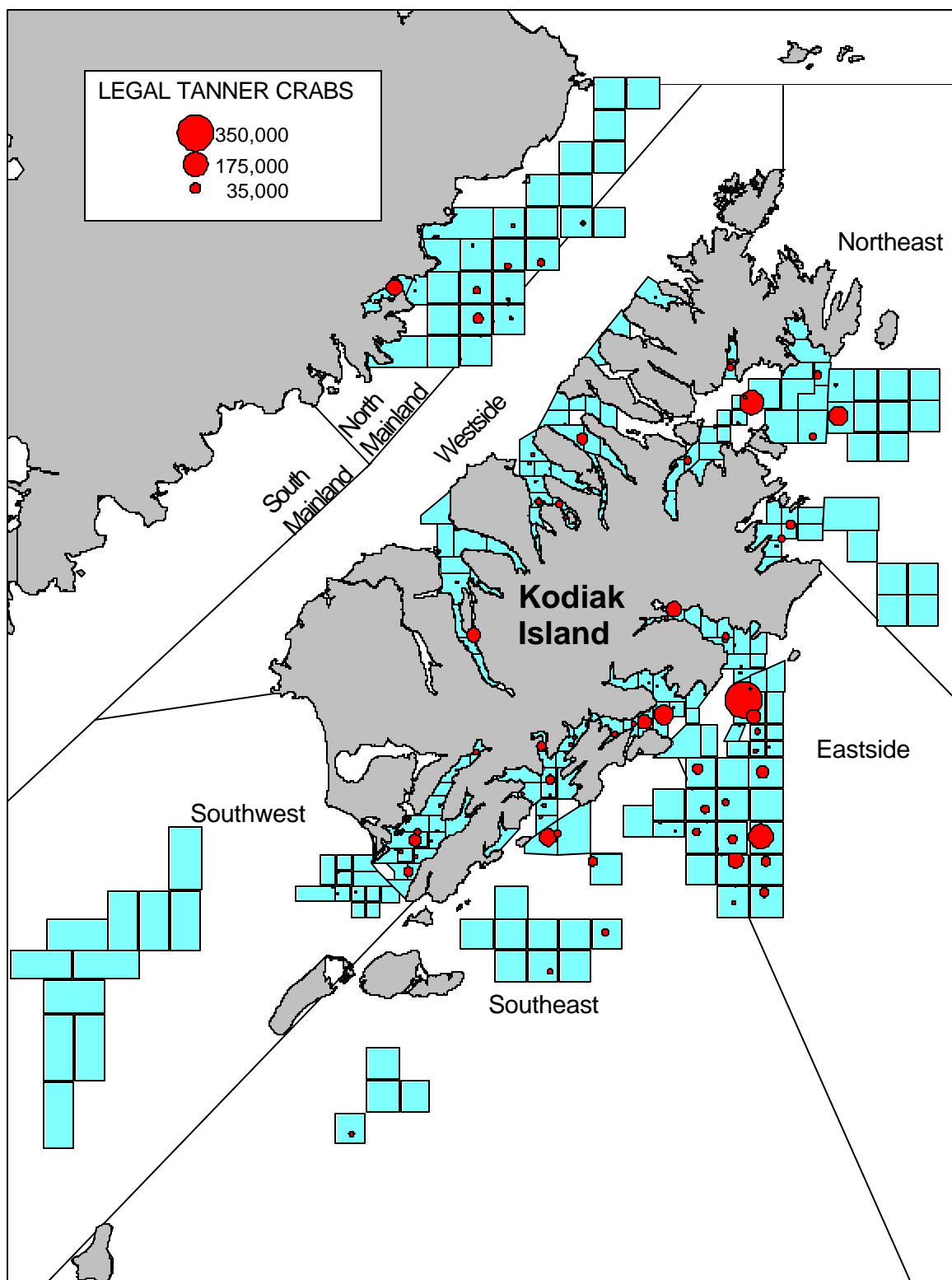


Figure 3. Population estimates of legal male Tanner crabs in the Kodiak District from the 2001 Kodiak trawl survey.

APPENDIX

Appendix A. Listing of contact persons, by agency and location.

Alaska Department of Fish and Game

web site: <http://www.cf.adfg.state.ak.us/region4/>

Kodiak office

<i>Mail address:</i>	211 Mission Road Kodiak, Alaska 99615	<i>physical address:</i>	211 Mission Road 2 nd floor, Kodiak	Phone: (907) 486-1840 FAX : (907) 486-1824
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Wayne Donaldson	Westward Region Shellfish/ Groundfish Biologist	wayne_donaldson@fishgame.state.ak.us
Mike Ruccio	Kodiak, Chignik, Alaska Peninsula Area Shellfish/ Groundfish Biologist	mike_ruccio@fishgame.state.ak.us
Kally Spalinger	Kodiak, Chignik, Shellfish Biologist	kally_spalinger@fishgame.state.ak.us

Dutch Harbor office

<i>Mail address:</i>	P. O. Box 920587 Dutch Harbor, Alaska 99692	<i>physical address:</i>	F.T.S. building, 2 nd floor Airport Beach Road, Dutch Harbor.	Phone: (907) 581-1239 FAX: (907) 581-1572
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Forrest Bowers	Bering Sea/Aleutian Islands Area Biologist	forrest_bowers@fishgame.state.ak.us
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Division of Fish and Wildlife Protection

web site: <http://www.dps.state.ak.us/fwp/>

Kodiak office

<i>Mail address:</i>	2921 A Mill Bay Road Kodiak, Alaska 99615	<i>physical address:</i>	2921 A Mill Bay Road	Phone: (907) 486-4761 FAX: (907) 486-5480
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Lieutenant Joanna Roop	Post Lieutenant	joanna_roop@dps.state.ak.us
Sargent Lonnie Gonzales	Post Sargent	lonnie_gonzales@dps.state.ak.us
Sven Skille	Trooper	sven_skille@dps.state.ak.us

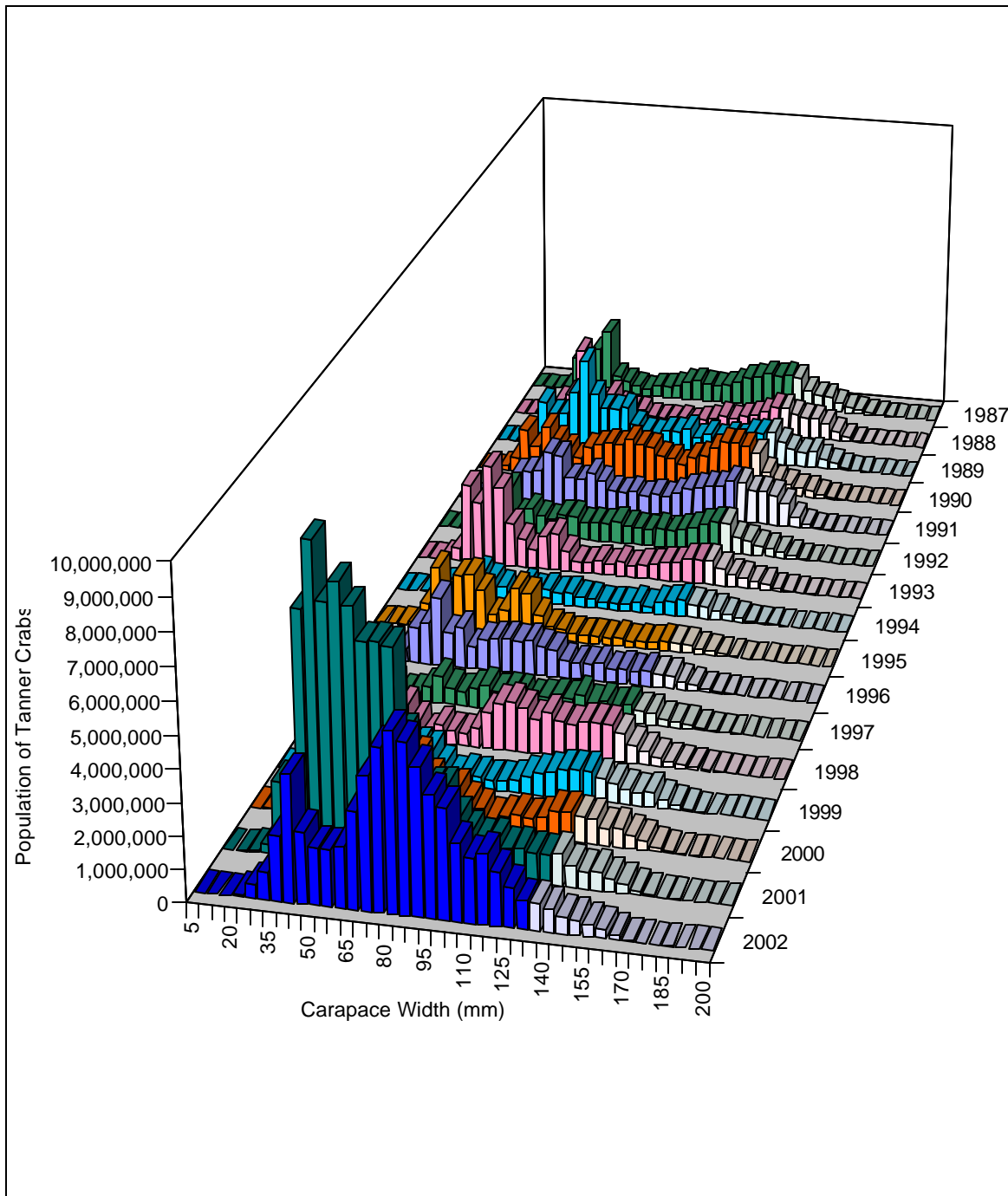
Commercial Fisheries Entry Commission

web site: <http://www.cfec.state.ak.us/>

Juneau office

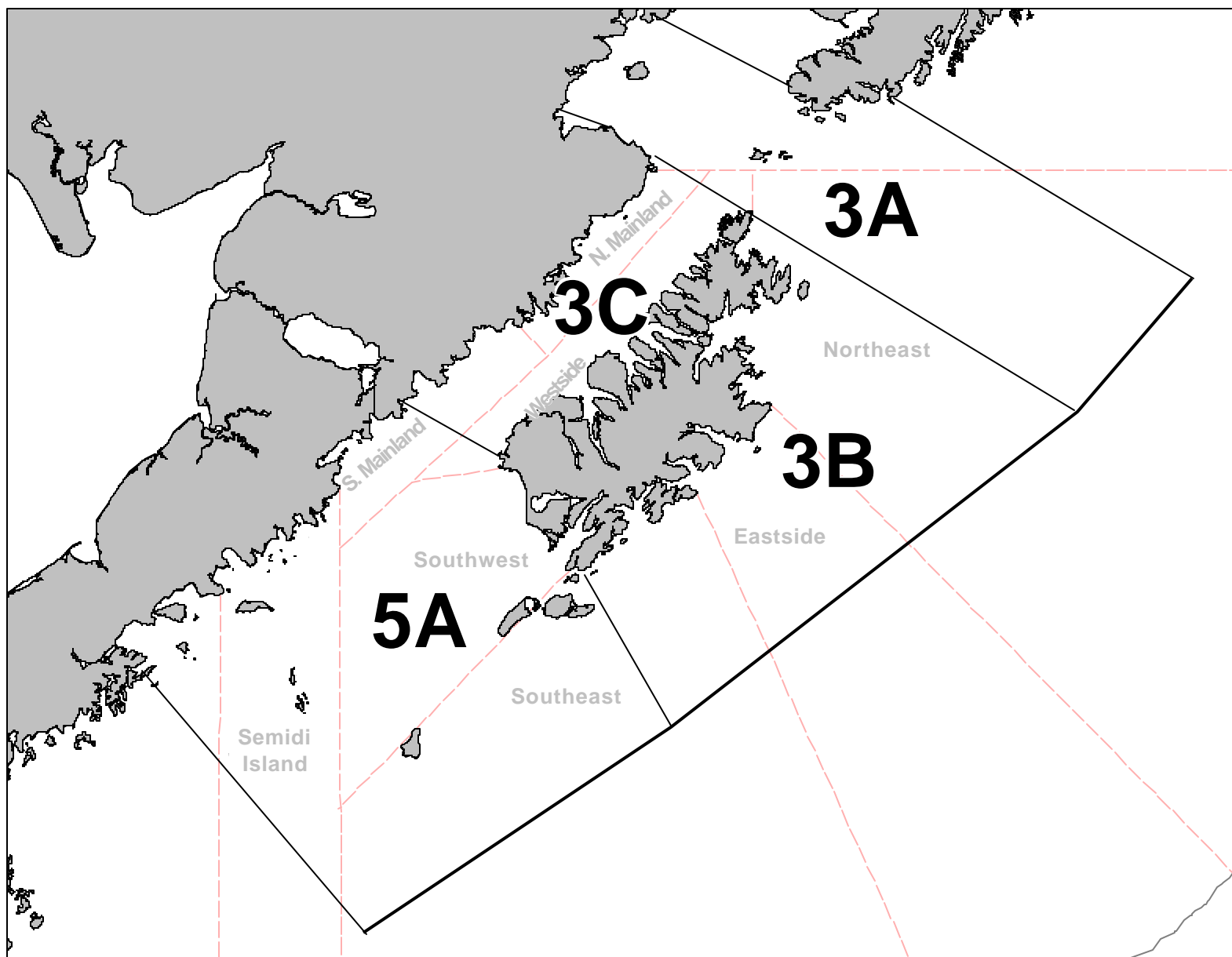
<i>Mail address:</i>	8800 Glacier Highway Juneau, Alaska 99615	<i>physical address:</i>	8800 Glacier Highway Juneau, Alaska	Phone: (907) 486-6160 FAX : (907) 486-6160
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Susan Haymes	CFEC staff	susan_haymes@cfec.state.ak.us
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Legal-size crab lightly shaded.

Appendix B. Estimated population of male Tanner crab by carapace width in the Kodiak District, 1987-2002.



Appendix C. National Weather Service forecast areas and Kodiak District Tanner crab management sections, 2003.

Appendix D. Example National Weather Service Forecast text and hypothetical weather delay actions.

FZAK63PANC

Kodiak Island & Cook Inlet (Areas 3A-C, 4, 4A)

Forecast header

FZAK63 PANC 251151

CWF063

MARINE FORCAST FOR KODIAK ISLAND WATERS AND COOK

NATIONAL WEATHER SERVICE ANCHORAGE AK

4 AM AST MON JAN 14 2003

VALID TO 6 AM TUE AND OUTLOOK TO 6 AM WED

Forecast issuance date and duration;
issued 4 AM, Monday, January 14.
24-hour forecast valid from 0600
Monday until 0600 Tuesday; outlook
valid from 0600 Tuesday, Jan. 15
until 0600 Wednesday, Jan. 16.

Synopsis

PKZ301-260000-

SYNOPSIS. A 998 MB LOW 150 NM SOUTH OF CORDOVA WILL WEAKEN TO
1008 MB AS IT MOVES TO 100 NM SOUTHWEST OF CAPE YAGATAGA BY MON
NIGHT AND THEN DISSIPATES. A 1002 MB LOW 425 NM SOUTHWEST OF
GAMBELL WILL MOVE TO NEAR KODIAK BY TUE NIGHT AS A 1006 MB LOW.

Forecast Area designation and location

AREA 3B. SHUYAK ISLAND TO SITKINAK.

HEAVY FREEZING SPRAY WARNING

GALE WARNING

48 hour forecast: from 0600 on
Monday, January 14 through 0600
Wednesday, January 16

24 hours } NORTHWEST WINDS 35 KTS WITH GUSTS TO 50 KTS DIMINISHING TO 25
KTS BY MON NIGHT. SEAS 18 FT SUBSIDING TO 12 FT MON NIGHT. HEAVY
48 hours } FREEZING SPRAY ENDING MON EVENING. OUTLOOK WINDS INCREASING TO
SOUTHEAST 25 KTS. SEAS 10 FT.

In this example, because a gale warning is in the 24 hour forecast, any fishery scheduled for the Northeast, Eastside, or Southeast Sections would not open as scheduled.

AREA 3B. SHUYAK ISLAND TO SITKINAK.

SMALL CRAFT ADVISORY

NORTHWEST WINDS 25 KTS WITH GUSTS TO 30 KTS DIMINISHING TO 20
KTS BY MON NIGHT. SEAS 22 SUBSIDING TO 10 FT MON EVENING. SNOW
MON NIGHT. OUTLOOK WINDS INCREASING TO SOUTHWEST 35 KTS. SEAS
BUILDING TO 20 FEET

In this example, because a gale warning is in the 48 hour outlook, any fishery scheduled for the Northeast, Eastside, or Southeast Sections would not open as scheduled.

AREA 3C. SHELIKOF STRAIT

SMALL CRAFT ADVISORY

NORTHWEST WINDS 25 KTS WITH GUSTS TO 30 KTS DIMINISHING TO 20
KTS BY MON NIGHT. SEAS 20 SUBSIDING TO 12 MON EVENING. SNOW MON
NIGHT. OUTLOOK SOUTHWEST WINDS 25 KTS. SEAS 12 FEET.

In this example, because a no gale warnings are posted in the 48 hour forecast, any fishery scheduled for the Westside or North Mainland Section would open as scheduled.

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If you believe you have been discriminated against in any program, activity, or facility, or if you desire further information please write to ADF&G, P.O. Box 25526, Juneau, AK 99802-5526; U.S. Fish and Wildlife Service, 4040 N. Fairfield Drive, Suite 300, Arlington, VA 22203 or O.E.O., U.S. Department of the Interior, Washington DC 20240.

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